

Remarks/Arguments

Claims 1-5 and 7-12 are pending.

The claims have been amended to more clearly and distinctly recite the subject matter that applicant regards as his invention. Claims 8-12 have been added to more fully claim the subject matter of the invention. No new matter is believed to be added by the present amendment.

Rejection of claims 1 and 3 under 35 USC 102(a) as being anticipated by Tsuge (US 5,995,709).

Applicant submits that for the reasons discussed below amended claims 1 and 3 are not anticipated by Tsuge.

The present invention concerns a method for managing the interoperability of digital devices, such as a digital video disc player and a digital television, interconnected via a digital bus. In particular, the present invention provides for transferring, via the digital bus, subpicture information in bit-map form and combining the subpicture information with decoded video information in the digital television. This invention overcomes the problems that may arise from additional requirement of decoding DVD subpictures and interpreting DVD navigation information in the digital television (see page 2, line 14 - page 3, line 10).

Tsuge discloses a video disk player that provides an output signal having text signal (e.g., closed caption data) inserted into scanning line H21 (col. 1, lines 51-55). A goal of Tsuge is to allow a television having a conventional character decoder to decode and display the output signals, including the text signals, from the video disk player in a known manner.

In this regard, Tsuge discloses that the video disk player shown in Fig. 1 includes circuit 37 that comprises decoder 9 that decodes the compressed video-CD data, and RAM 8 for storing closed caption data that has been read from the video-CD, decoded and converted to NRZ data (col. 3, lines 42-43; col. 3, lines 58-60; col. 4, lines 50-52). Decoder 9 also includes CPU 31 that controls the insertion of the closed caption data into scanning line H21 when closed caption data is enabled (col. 8, line 64 - col. 9, line 5; see also Fig. 14). The output signal, including the closed caption data, is then provided according to NTSC or PAL format at the VIDEO OUTPUT. Thus, Tsuge teaches a video disk player that

provides an output signal having a closed caption component in a format that can be recognized and processed in a known manner by a television having a conventional character decoder.

At the outset, Applicant notes that the disclosure of Tsuge relates to a video disk player and the components therein. Tsuge does not disclose a method for controlling digital processing apparatus that is connected to, and distinct from, a video disk player and its internal components. Therefore, applicant respectfully submits that a reference restricted to a video disk player and its internal components is not applicable to the present invention.

However, Applicant submits that even if Tsuge is applied to the present invention, Tsuge fails to disclose notable elements of the claimed invention. Present claim 1 recites "... combining, in said digital video processing apparatus, said bit-map data received from said digital video disc player and said decoded program content stream to produce a signal representative of a combined image suitable for display." Even if decoder 9 could be construed to perform the step of combining the closed caption data and the video data, Tsuge clearly teaches that the closed caption data and the video data are placed on separate scanning lines. Thus, Tsuge does not teach combining to generate a **signal representative of a combined image** suitable for display. In fact, Tsuge expressly teaches maintaining the closed caption data separate from the video data because such a format allows a television having a conventional character decoder to recognize and process the output signal. Therefore, Applicant submits that Tsuge fails to disclose or suggest a notable feature of present claim 1, and as such, claim 1 is not anticipated by Tsuge. Claim 3 includes a similar limitation in apparatus form, and as such, Applicant submits that claim 3 is also not anticipated by Tsuge.

Rejection of claims 1-4 under 35 USC 102(b) as being anticipated by Nakai et al. (US 5,999,698)

Applicant submits that for the reasons discussed below amended claims 1 and 3 are not anticipated by Nakai et al.

Like Tsuge, Applicant notes that the disclosure of Nakai relates to a video disk player and the components therein. Nakai does not disclose a method for controlling digital processing apparatus that is connected to, and distinct from, a

video disk player and its internal components. Therefore, applicant respectfully submits that a reference restricted to a video disk player and its internal components is not applicable to the present invention.

However, even if Nakai is applied, Applicant submits that Nakai fails to disclose or suggest a notable feature of the claimed invention. Nakai relates to a video disk player that provides, to a user, an indication that a multi-angle video portion is available. In that regard, the video disk player according to Nakai comprises known video disk player elements, including a mechanism for reading data from the disk, system processor 54, video decoder 58, sub-picture decoder 62, and video mixer 64A. The video decoder 58, sub-picture decoder 62 and video mixer 64A operate in the known manner to decode the compressed video data, decode the sub-picture data, and combine the video data and the sub-picture data.

In this case, the functions of "... receiving from said digital video disc player, via said digital bus, bit-map data representative of a sub-picture... and combining, in said digital video processing apparatus, said bit-map data received from said digital video disc player and said decoded program content stream ..." are implemented within video mixer 64A. Video mixer 64A receives the bit-map data from sub-picture decoder 62, which receives the encoded sub-picture data from the mechanism that reads the data from the disc. In this case, nowhere does Nakai disclose or suggest that program content stream in a compressed format and the bit-map data are received via the **digital bus interconnecting the digital video processing apparatus and the digital video disc player**. In fact, the bit-map data is received from sub-picture decoder 62 while video decoder 58 appears to receive the program content stream, including data in a compressed format, from system processor 54. In view of the above, applicant submits that Nakai fails to disclose or suggest notable features of present claim 1, and thus, claim 1, and claim 2 which depends therefrom, are not anticipated by Nakai. Claim 3 includes a similar limitation in apparatus form, and as such, Applicant submits that claim 3, and claim 4 which depends therefrom, are also not anticipated by Tsuge.

Rejection of claims 6 under 35 USC 103(a) as being unpatentable over Yanagihara (US 6,211,800) and Nakai.

Claim 5 has been amended to include the limitations of claim 6, and claim 6 has been cancelled. Applicant submits that for the reasons discussed below amended claim 5 is patentably distinguishable over the teachings of Yanagihara and Nakai.

The Office Action acknowledges that Yanagihara fails to teach transmitting bit-map data to a television via an asynchronous channel, but asserts that it would be obvious to combine Yanagihara with the teachings of Nakai to derive the claimed invention. Applicant strongly disagrees and submits that there is no teaching in either Yanagihara or Nakai to combine the references in the manner suggested.

Yanagihara teaches a system that converts a program stream read from disc 101 to a transport stream for transport to a presentation device via a 1394 transmission/reception section. As the Office Action acknowledges, Yanagihara does not teach or suggest transmitting bit-map data representative of a subpicture via an asynchronous channel.

As discussed hereinabove, Nakai teaches a system that provides to a user an indication that multi-angle video images are available on a particular disc. In that regard, the disc player according to Nakai includes a video decoder that generates a video signal representing the program, a sub-picture decoder that generates a signal representing the sub-picture, and a video mixer that combines the signals and provides the combined signal to a monitor/display. Specifically, Nakai states that the "... video signal and the sub-picture signal are mixed, and the mixed data is supplied to monitor 6." (col. 23, lines 1-2)

It appears that a combination of Yanagihara and Nakai would result in an arrangement wherein the video signal is mixed with the sub-picture signal, and the mixed data is converted to a transport stream format for transport via the 1394 bus. However, nowhere does either Yanagihara or Nakai teach or discuss why it would be desirable to transmit the sub-picture data over an asynchronous channel **after the video signal and sub-picture data have been combined**, or how such an arrangement would be implemented. Nowhere does either Yanagihara or Nakai teach or suggest how such an arrangement would enhance the capacity of the apparatus of Yanagihara as alleged in the Office Action. In fact, transmitting the sub-picture data over the asynchronous channel when the sub-picture data has

already been mixed with the video signal for transfer over the isochronous channel results in additional data being transferred, and does nothing to enhance the capacity of the apparatus. Therefore, Applicant submits that the combination of Yanagihara and Nakai does not teach or suggest the claimed invention, and as such, amended claim 5 is patentably distinguishable over the suggested combination.

Rejection of claims 7 under 35 USC 103(a) as being unpatentable over Yanagihara (US 6,211,800) and Nakai.

Present claim 7 depends from amended claim 5. Applicant submits that the further teachings of Yanagihara cited do not cure the defect of Yanagihara and Nakai as applied to amended claim 5. Therefore, Applicant submits that claim 7, which depends from amended claim 5, is also patentably distinguishable over the teachings of the cited prior art references for at least the same reasons as those discussed above.

Having fully addressed the Examiner's rejections, Applicant submits that the present application is in condition for allowance and respectfully request such action. No fee is believed due in regard to the present amendment. However, if a fee is due, please charge the fee to Deposit Account 07-0832. Should any questions arise regarding any of the above, the Examiner is requested to contact the undersigned at 609-734-6815.

Respectfully submitted,
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Eliza Buchalczyk